

THE *ANTHONOMUS CAVEI* SPECIES GROUP
(COLEOPTERA: CURCULIONIDAE)

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Abstract.—Three new species of neotropical Anthonomini, *A. cavei* (El Salvador, Honduras, México, Panamá), *A. ironia* (Colombia) and *A. praetextum* (Brazil), are assigned to the *Anthonomus cavei* group. Adults, larvae and pupae of *A. cavei* were collected on *Byrsonima crassifolia* (L.) H.B.K. (Malpighiaceae), and adults of *A. praetextum* were collected on an unidentified Malpighiaceae. Characters diagnostic of the *A. cavei* group and of each of the species are described and some are illustrated. A key to the species is presented. The *A. cavei* group appears to be most closely related to the *A. furcatus* group.

Key Words: Neotropical Anthonomini, Malpighiaceae, *Byrsonima*, immature insects

The assertion “. . . not found in BCA . . .” is part of a label on a Panamanian weevil in the collections of the U.S. National Museum of Natural History (USNM). Made with a lead pencil on folded yellow paper, the inscription is in the hand of the U.S. Department of Agriculture scientist in charge of the weevil collections at the USNM between 1929 and 1949, L. L. Buchanan. The statement alludes to the fact that the specimen represents a species that is not among the Central American Anthonomini treated in the *Biologia Centrali-Americana* (Champion 1903, 1906, 1910).

The aforementioned label also states “. . . *Anthonomus* of *flavirostris* group . . .,” but the species does not belong with the species presently assigned to the *A. flavirostris* group (Clark 1990). Nor does the species fit conveniently in any of the other previously recognized *Anthonomus* species group. Thus it is placed along with two additional, related, likewise previously undescribed species, in the *A. cavei* group.

Descriptions, illustrations, and a key to

adults of these three species in the *A. cavei* group are presented in this paper. Descriptions of the larval and pupal stages of one of the species are also provided.

MATERIALS AND METHODS

The 149 adult weevil specimens examined are from the collections of the following individuals and institutions (letter codens identify the collections in the text):

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| AUEM | Auburn University Entomological Collections, Auburn, Alabama, USA; |
| CNCI | Canadian National Collection of Insects and Arachnids, Ottawa, Canada; |
| CWOB | Collection of C. W. O'Brien, Tallahassee, Florida, USA; |
| DEIC | Deutsches Entomologisches Institut, Eberswalde, Germany; |
| DZUP | Universidade Federal do Paraná, Curitiba, Brazil; |
| EAPZ | Escuela Agrícola Panamericana, El Zamorano, Francisco Mora- |

- zán, Honduras;
 HAHC Collection of H. and A. Howden, Ottawa, Canada;
 HPSC Collection of H. P. Stockwell, Smithsonian Tropical Research Institute, Panamá;
 MCZC Museum of Comparative Zoology, Cambridge, Massachusetts, USA;
 MZSP Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil;
 TAMU Texas A&M University, College Station, Texas, USA;
 USNM National Museum of Natural History, Washington, D.C., USA.

Measurements were made with an ocular micrometer in a dissecting microscope as follows: total body length from anterior margin of eye to elytral apex in lateral view; width across elytra at widest point; length of pronotum from anterior to posterior margins; length of rostrum from anteroventral margin of eye to apex, across arc, in lateral view; length of apical portion of rostrum from antennal insertion to apex in lateral view; width of frons at narrowest point between eyes; width of base of rostrum just distad of eyes in dorsal view; and width of pro- and metafemora, in anterior view, excluding inner marginal teeth. The range and, in parentheses, the mean and sample size of each measurement, are given for each species.

Exact label data are cited for types. Separate labels are indicated by brackets ([]), separate lines by slashes (/).

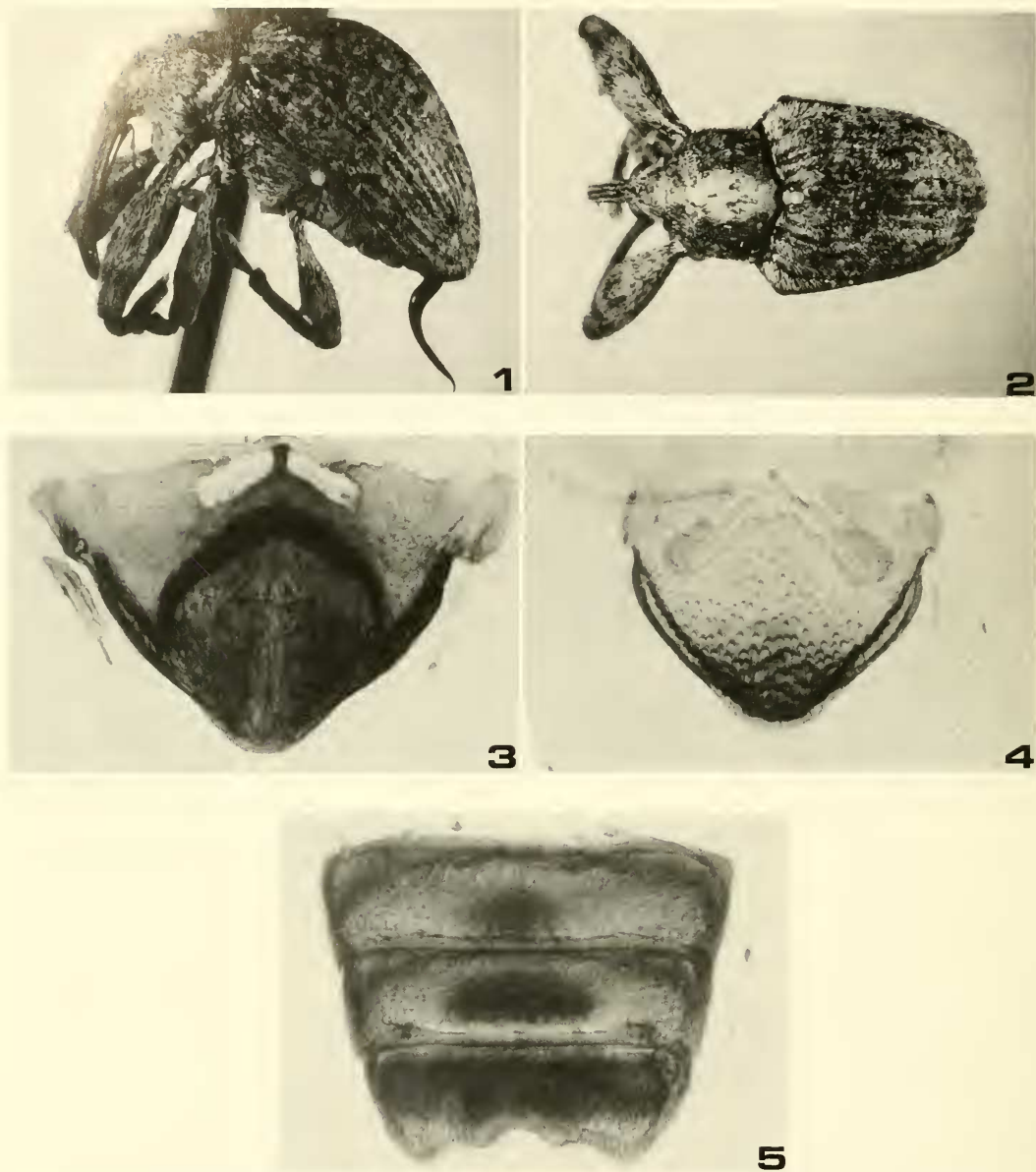
Terminology used to describe pupal characters follows Burke (1968). Terminology of larval characters is that of Anderson (1947) and Thomas (1957). Where differences in terminology exist between the latter two systems, terms used by Thomas are placed in parentheses following those of Anderson. Description of the larval stage is based on fullgrown specimens.

THE *ANTHONOMUS CAVEI*
 SPECIES GROUP

Recognition characters.—The species in the *A. cavei* group have the following unique combination of characters: Elytral humeri prominent, sides converging posteriorly (Figs. 1, 2); interstriae 3 and 4 with subbasal prominences; interstria 3 with median prominence that is slightly to much higher anteriorly and especially posteriorly than in the middle; tegmen thick, with short, slender parameres; profemur enlarged, ca. 1.3–1.6× as wide as metafemur, with a large, conical, somewhat flattened, ventral tooth with a deep anterobasal emargination that produces a much smaller, slightly curved, slightly more apical tooth.

The species in the group are additionally characterized as follows:

Adult.—*Length*: 3.4–4.7 mm. *Width*: 1.7–2.4 mm. *Head*: Slightly constricted behind eyes; vertex with long, slender, attenuate, ferruginous scales and broader, intermixed, cretaceous scales; venter with slightly broader, slightly imbricated, cretaceous scales; eyes round, strongly, evenly convex, separated by distance ca. equal to 0.6 × width of rostrum at base. *Rostrum*: Strongly tricarinate; feebly curved basally, more strongly curved over antennal insertions. *Antenna*: Funiculus 7-articulate. *Prothorax*: In dorsal view, sides rounded behind subapical constriction, slightly widened at extreme base; dorsum with two, low, antero-median prominences and two, lower, posteromedian prominences; dorsum with broad, spindle-shaped, median vitta of elongate, attenuate, imbricated, cinereous scales; lateral portions of dorsum and pleuron with elongate, attenuate, ferruginous scales and broader, cinereous scales, the latter broadest and most dense posterolaterally and in small postocular cluster. *Elytra*: Suturel interstriae slightly elevated from slightly beyond scutellum; interstriae with elongate, attenuate ferruginous scales and broader, cretaceous scales, the latter fascic-



Figs. 1-5. 1, 2, *Anthonomus cavei*, lateral and dorsal habitus, ♂, Pacora, Panamá, Panamá. 3, 4, *Anthonomus cavei* group members, pygidium, ♀, dorsal view. 3) *A. cavei*, El Zamorano, Francisco Morazán, Honduras. 4) *A. ironia*, Espinal, Tolima, Colombia. 5, *Anthonomus cavei*, abdominal sternae 3-5, ♂ holotype, ventral view.

ulate, most dense on posteromedian portions of interstriae 1-4; striae shallow, strial punctures small; strial scales absent or small. *Pygidium* (Figs. 3, 4): Male explanate apicomediaally, with sparse, elongate scales re-

placed by setiform scales apicomediaally; female slightly extended to bluntly rounded apex. *Abdomen*: Sterna 1-4 with long, attenuate, leucine scales, with broader, more pallid scales on posterolateral margins. *Legs*:

Protibia of male with preapical, inner-marginal tooth; mesotibial and metatibial mucrones of female obsolete.

Relationships.—The species in the *A. cavei* group appear to be closely related to the species in the *A. furcatus* group. Adults of the species of both groups are relatively large and have large profemora with a large ventral tooth and a smaller, more apical tooth. The armature of the endophallus is also similar in the two groups. The species in the *A. cavei* group do not have apicolateral aedeagal prominences like the ones that characterize the species in the *A. furcatus* group (Clark 1988: Figs. 23–32). They also lack the isolated posteromedian sclerite characteristic of sternum 5 of the male abdomen of members of the *A. furcatus* group (Clark 1988: Figs. 19, 20) and most of the species in the *Anthonomus* subgenus *Anthomorphus* (Clark 1987).

Plant associations.—Adults of *A. cavei* were collected on *Byrsonima crassifolia* (L.) H.B.K. (Malpighiaceae) in Honduras. Larvae, pupae and pre-emergent adults of the same species were removed from flower buds of the same plants. Adults of *A. praetextum* were collected on unidentified Malpighiaceae at Cardeal Mota, Minas Gerais, Brazil.

KEY TO SPECIES IN THE
ANTHONOMUS CAVEI GROUP

- 1 Mesotibia of male with broad, subacute, median prominence on inner margin (Fig. 6); mesotibial mucro of male with long basal prominence (Fig. 6); metatibia of male with broader, more blunt, inner marginal prominence (Fig. 7); metatibial mucro of male short, truncated, emarginate, with a long, blunt, hooked basal prominence (Fig. 7); sternum 5 of male abdomen with deep apicomedian emargination (Fig. 5); aedeagus strongly sinuate in lateral view (Fig. 12); 9th sternite of male with apodeme expanded at apex, basal plates short, thick, rounded (Fig. 9); female pygidium with deep, crescent shaped, posteromedian depression (Fig. 3) *A. cavei*
- 1' Mesotibia of male with slight, broadly rounded, median prominence on inner margin; mesotibi-

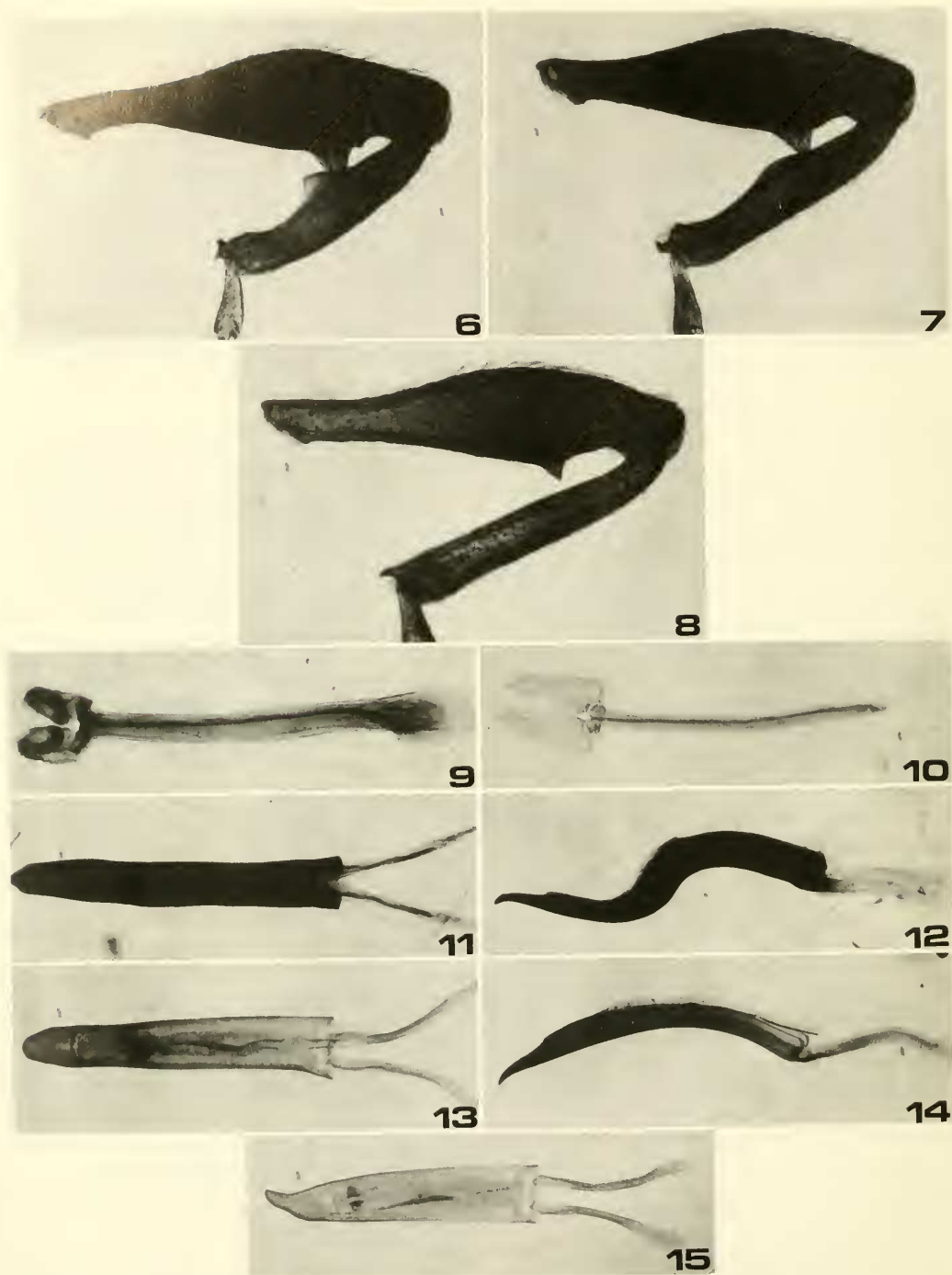
- al mucro of male without basal prominence; metatibia of male with inner margin nearly straight (Fig. 8); metatibial mucro of male short, slightly curved, extended parallel to long axis of tibia, without basal prominence (Fig. 8); sternum 5 of male without apicomedian emargination; aedeagus broadly, evenly curved in lateral view (Fig. 14); 9th sternite with apodeme not expanded at apex, basal plates narrowed apically (Fig. 10); female pygidium without posteromedian depression (Fig. 4) 2
- 2 Aedeagus symmetrical, bluntly rounded apically, subparallel-sided in dorsal view; endophallus with two large, strongly curved, basal spines with a smaller, curved spine between them and with a slender, straight, more apical sclerite (Fig. 13); profemur ca. 1.6× as wide as metafemur *A. ironia*
- 2' Aedeagus asymmetrical in apical 1/3 in dorsal view; endophallus with two strongly curved, basal spines and with a long, slender, more apical sclerite (Fig. 15); profemur ca. 1.3× as wide as metafemur (Fig. 8) *A. praetextum*

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NEW SPECIES

Figs. 1–3, 5–7, 9, 11, 12

Holotype.—HONDURAS. *Francisco Morazán*: male [Honduras: F. Mora./ El Zamorano/ 12 July, 1989/ W. E. Clark] (USNM).

Paratypes (132).—HONDURAS. *Comayagua*: [COMAYAGUA. HOND/ 0-6-79/ No 20641] [Dr. Jerome/ V. Mankins] (1 female USNM). *El Paraíso*: [Honduras: El Par./ Jacaleapa/ 20 July, 1989/ W. E. Clark] (1 male, 3 females AUEM). *Francisco Morazán*: [Honduras: F. Mora./ El Zamorano/ 12 July, 1989/ W. E. Clark] (3 males, 5 females AUEM); [Honduras: F. Mora./ El Zamorano/ 17 July, 1989/ W. E. Clark] (16 males, 7 females AUEM); [Honduras: F. Mora./ foothills e. El/ Zamorano 12 July/ 1989 W. E. Clark] (6 males, 1 female AUEM); [Honduras: F. Mora./ foothills e. El/ Zamorano 18 July/ 1989 W. E. Clark] [reared from/ flower buds] [Byrsonima/ crassifolia] (19 males, 13 females AUEM; 4 males, 4 females EAPZ; 4 males, 4 females TAMU). EL SALVADOR. *Cabañas*: [EL SALVADOR, Cab./ 3 mi. SE.



Figs. 6-15. 6, *Anthonomus cavei*, left mesothoracic leg, ♂ holotype, anterior view. 7, 8, *Anthonomus cavei* group members, metathoracic leg, ♂, anterior view. 7) *A. cavei*, holotype. 8) *A. praetextum*, holotype. 9, 10, *Anthonomus cavei* group members, ♂ 9th sternite, ventral view. 9) *A. cavei*, holotype. 10) *A. ironia*, holotype. 11-15, *Anthonomus cavei* group members, aedeagus, dorsal and lateral views. 11) *A. cavei*, holotype, dorsal view; 12) *A. cavei*, holotype, lateral view; 13) *A. ironia*, holotype, dorsal view; 14) *A. ironia*, holotype, lateral view; 15) *A. praetextum*, dorsal view.

Ilobasco./ 2100' VI-9-1974 C&L/ O'Brien & Marshall] (1 male CWOB). *La Libertad*: [El Salvador/ 20 km./ E. La Libertad, V.3, / 1971 H. F. Howden] (11 males, 12 females HAHC). MEXICO. [337/ S] [Mex] (1 male MCZC). PANAMA. *Panamá*: [PANAMA: Panamá/ 5 mi. NW Gamboa/ 15 JUL 76 Y Lubin/ canopy fog] (1 male HPSC); [Pacora Panama/ II-5-45/ H. H. Stage] [Area E on sheet/ 6 hrs. after/ treatment/ 45-4519] [genus nr./ *Anthonomus*] (1 male USNM); [Pacora Panama/ II-6-45/ H. H. Stage] [Area C sheet/ 6 hrs. after/ treatment/ 45-4519] (2 males, 1 female USNM); [Pacora Panama/ II-6-45/ H. H. Stage] [Area E sheet/ 24 hrs. after/ treatment/ 45-4519] (1 male USNM); [Pacora Panama/ II-6-45/ H. H. Stage H-214/ 45-8914] (1 male USNM); [Pacora Panama/ II-7-45/ H. H. Stage H212/ in jungle/ 45-8914] (2 males 1 female USNM); [Pacora Panama/ II-7-45/ H. H. Stage/ Area C 24 hrs. / 45-4519] [Appar an/ *Anthonomus*/ of *flavirostris*/ group - not/ found in BCA/ (See. S. Amer.)] [Note/ remarkable/ ♂ med. lobe/ (mating end/ to end?)] (1 male USNM); [Pacora Panama/ II-7-45/ H. H. Stage/ Area C 24 hrs./ 45-4519] (4 females USNM); [Pacora Panama/ II-9-45/ H. H. Stage] [Nr. Trap B-4/ on sheet/ 45-4519] [Nr. Trap B4/ 2-9-45/ on sheet] (1 female USNM).

Recognition characters (Figs. 1, 2).—*Anthonomus cavei* is distinguished from the other two species in the *A. cavei* group by the characters of the meso- and metatibia of the male, sternum 5 of the male abdomen, the aedeagus and 9th sternite of the male genitalia, and of the female pygidium listed in the key to the species of the group.

Adult male.—*Length*: 4.2–4.7 mm (mean = 4.5, n = 10). *Width*: 2.1–2.3 mm (mean = 2.2, n = 10). *Rostrum*: Length 1.4–1.6 (mean = 1.5, n = 10) × pronotal length; length of apical portion 21–26% (mean = 23, n = 10) of total rostral length. *Abdomen* (Fig. 5): Sternum 5 flattened and sparsely setose medially, with deep apicomedian emargination. *Legs* (Figs. 6, 7): Profemur

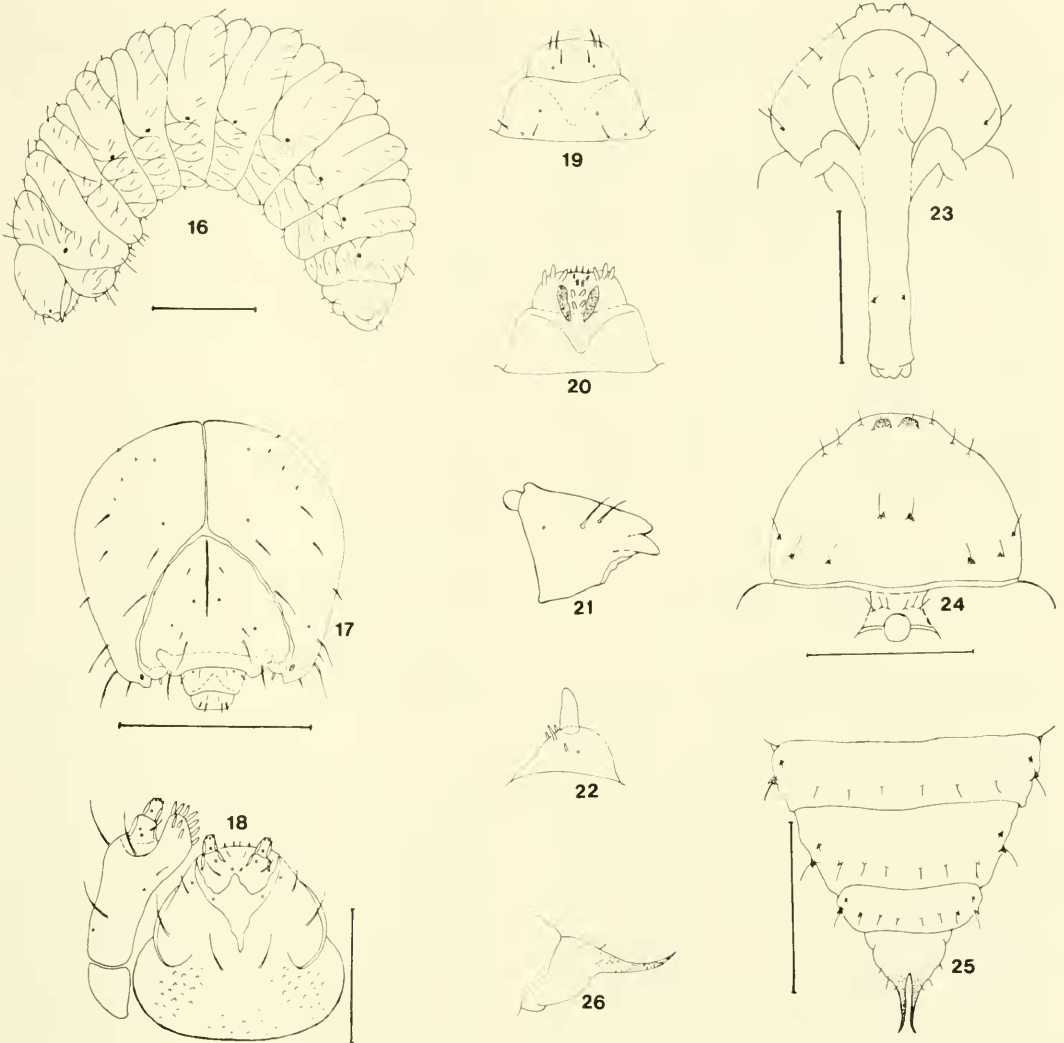
ca. 1.3× as wide as metafemur; protibia with slight inner marginal prominence in apical $\frac{2}{3}$; protibial uncus long, nearly straight, with slight basal prominence; mesotibia with broad, subacute, median prominence on inner margin, mesotibial mucro short, with long basal prominence; metatibia with broader, more blunt, inner marginal prominence; metatibial mucro short, truncated, emarginate, with a long, blunt, hooked basal prominence. *Genitalia* (Figs. 9, 11, 12): 9th sternite with apodeme expanded at apex, basal plates short, thick, rounded; aedeagus subparallel-sided in dorsal view, with slight, obtuse, subapicolateral prominences, strongly sinuate in lateral view; endophallus with two strongly curved basal spines, a slender, slightly curved sclerite between them and with a slender, straight, more apical sclerite.

Adult female.—*Length*: 4.1–4.6 mm (mean = 4.2, n = 10). *Width*: 1.8–2.4 mm (mean = 2.2, n = 10). *Rostrum*: Length 1.3–1.5 (mean = 1.4, n = 10) × pronotal length; length of apical portion 26–31% (mean = 27, n = 10) of total rostral length. *Pygidium* (Fig. 3): With deep, crescent shaped, posteromedian depression. *Legs*: Protibial uncus short, slender, without basal prominence.

Larva.—*Body* (Fig. 16): Strongly curved; length 2.6–4.9 mm (measured across arc of body). Asperities minute, varying from rounded to somewhat acutely pointed, fairly evenly distributed over body. Setae pale, inconspicuous. Color dingy white; pronotum not pigmented. *Head* (Fig. 17): Color amber. Broadly rounded posteriorly with sides becoming less rounded anteriorly. Width 0.67–0.77 mm (n = 30). *Antenna* (Fig. 22): Basal article bearing elongate-oval appendage and four short, stout setae, one of which is longer than others. *Endocarina* (endocarinal line): Distinct, extending slightly past middle of frons. *Epicranial suture* (coronal suture): Slightly less than $\frac{1}{2}$ length of head capsule. *Frontal setae*: Four pairs; setae 1 and 3 short, seta 3 located

dorsad and slightly laterad of 4; setae 4 and 5 approximately equal in length, distinctly longer than 1 and 3. *Frontal sensilla*: Two pairs; one pair located approximately equidistant from setae 1 and 3, other pair laterad and slightly dorsad of seta 3. *Dorsal epicranial setae*: Five pairs; setae 1, 4 and 5 slender, long; seta 2 longer than 3, both distinctly shorter than other dorsal epicranial setae; seta 4 located close to frontal suture. *Posterior epicranial setae*: Four pairs; minute, peglike arranged in strongly curved line; lower seta of series located above and slightly mesad of dorsal epicranial seta 2. *Dorsal epicranial sensilla*: Three pairs; one pair located between innermost posterior epicranial setae; one pair directly above dorsal epicranial setae 1; one pair approximately midway between dorsal epicranial setae 4 and 5. *Lateral epicranial seta*: 1, ca. length of lateral epicranial seta 2. *Ventral epicranial seta*: 1, slightly shorter than ventral epicranial seta 2. *Clypeal setae* (Fig. 19): Ca. same length, seta 1 located closer to anterior margin of frons than 2. *Clypeal sensilla*: Two pairs; one pair located ca. equidistant between clypeal setae 1 and 2; one pair located in front of setae 1. *Labral setae*: Three pairs; setae 1 and 2 ca. same length; seta 3 shorter. One pair of sensilla located laterad of labral setae 1. *Epipharynx* (Fig. 20) (epipharyngeal lining): Bearing two pairs of anteromedian setae. Three pairs of stout anterolateral setae present. *Labral rods* (tormae): Elongate, converging posteriorly. *Epipharyngeal sensory pores*: Four, arranged in two clusters of two pores each. Two pairs of stout median epipharyngeal spines present between labral rods. *Mandibles* (Fig. 21): Each with two bluntly to fairly sharply pointed teeth; two long setae ca. same length; one sensillum located near base of mandible. *Maxillary palpus* (Fig. 18): With apical article ca. same length as basal article; bearing several minute papillae at apex; sensillum located near middle. Basal article bearing seta of moderate length and two sensilla. *Stipital setae*: 1, 3 and 4 long, ca. equal in length; seta 2 much shorter. *Mala* (lacinial lobe): Bearing

10 stout setae, seven dorsal (dorsal lacinial) and three ventral (ventral lacinial). *Labial palpus* (Fig. 18): Consists of two articles; apical article bears several minute papillae and a sensillum. Basal article bears two sensilla. *Premental sclerite*: With moderately long posterior process and pair of sensilla near bases of lateral arms. One pair of long premental (prelabial) setae present. Three pairs of glossal setae, posteriormost pair slightly longer. Three pairs of postmental setae, setae 1 and 2 subequal in length, seta 3 much shorter. *Thorax* (Fig. 16) (setae described on one side of body only): Pronotum bearing eight long setae. One prodorsal and five postdorsal setae present on each of meso- and metathorax; postdorsal setae 2 and 4 shorter than setae 1, 3 and 5. Two spiracular (alar) setae of unequal length present. Epipleural (dorsopleural) lobe bearing one long seta. Two pleural (ventropleural) setae of unequal length on prothorax; one long seta on each of meso- and metathorax. Three long pedal (laterosternal) setae, one of which is much longer than others. Sternal (mediosternal) seta short, inconspicuous. *Abdomen* (Fig. 16): Abdominal segments 1–7 with three distinct dorsal folds. Prodorsum (fold I) of segments 1–8 each with short seta. Five postdorsal (fold III) setae on each of segments 1–8; setae 1, 3 and 5 longer than setae 2 and 4. Two spiracular (alar) setae; one seta distinctly longer than other. Epipleurum (dorsopleurum) bearing one long and one short seta. One short pleural (ventropleural) seta. Two minute pedal setae. Anus subterminal; surrounded by four lobes, each bearing a minute seta; anterior and posterior lobes prominent, lateral lobes narrow and inconspicuous. Segment 9 bearing prominent lateral lobe and eight short setae. Spiracles bicameral; air tubes each with four or five annuli. (Thirty specimens from the foothills east of El Zamorano, Francisco Morazán, Honduras, extracted from flower buds of *Byrsonima crassifolia*, 18 July, 1989, by W. E. Clark (TAMU); identified by association with adults.)



Figs. 16–26. 16–22, Third instar larva of *Anthonomus cavei*. 16) lateral view; 17) head capsule, frontal view; 18) labium and right maxilla, ventral view; 19) clypeus and labrum; 20) epipharynx; 21) mandible; 22) antenna. Line accompanying Fig. 16 = 1.0 mm; Fig. 17 = 0.5 mm; Fig. 18 = 0.25 mm; other larval figures greatly enlarged. 23–26, Pupa of *Anthonomus cavei*. 23) head, rostrum and ventral view of prothorax; 24) pronotum and mesonotum, dorsal view; 25) terminal abdominal segments, dorsal view; 26) 9th abdominal segment, lateral view. Lines accompanying Figs. 23, 24 and 25 = 1.0 mm; Fig. 26 greatly enlarged.

Pupa.—*Length*: 4.4–5.6 mm (n = 7). *Head* (Fig. 23): Frontal setae inconspicuous, straight, each borne on summit of low, rounded tubercle; pair separated by distance 2× length of a seta. Supraorbital setae absent. One pair of fine, straight basisrostral (interocular) setae; each approximately same length as frontal seta; each borne on small tubercle. One pair of distirostral setae; each

seta short, inconspicuous, ca. same length as sharply pointed tubercle on which it is borne. *Pronotum* (Fig. 24): Pronotal setae fine, straight to slightly curved; setae on anterior margin slightly shorter than on posterior margin. Anteromedian setae minute, each borne on anterior face of transverse, truncate tubercle; tubercles separated by distance less than width of a tubercle. Three

pairs of anterolateral setae; each borne on summit of low, rounded tubercle; tubercles usually ca. equidistant from each other. Posteromedian setae each borne on side of sharply pointed tubercle; tubercles separated by distance equal to length of a seta. Three pairs of posterolateral setae arranged in moderately strongly curved line on each side of pronotum; each seta borne subapically on sharply pointed tubercle. *Mesonotum* (Fig. 24): Three pairs of straight mesonotal setae; each borne on summit of low, rounded tubercle; outer seta slightly longer than others. *Metanotum*: Three pairs of straight metanotal setae; each borne on low tubercle; setae increasing in length outward; more widely separated than mesonotals. *Abdomen* (Fig. 25): Three pairs of pale, inconspicuous discotergal setae; each borne on summit of small, rounded tubercle except outer seta on tergites 6–8 which arises from side of sharply pointed tubercle. Laterotergal seta 1 short, not longer than sharply pointed tubercle on which it is borne. Laterotergal seta 2 located subapically on sharply pointed tubercle; on basal tergites tubercle occasionally without sharp point. Spiracles well developed on first five abdominal segments, absent on others. Laterosternal and sublaterosternal setae absent. Segment 9 bearing pair of slender, pigmented, sharply pointed processes which curve upward near apex (Fig. 26); one pair of fine setae borne laterally on segment anteriorly to bases of processes; two pairs of setae on bases of processes, one pair of which is located dorsally. (Seven specimens from the foothills east of El Zamorano, Francisco Morazán, Honduras, extracted from flower buds of *Byrsonima crassifolia*, 18 July, 1989, by W. E. Clark (TAMU); identified by association with adults.)

Plant associations.—The paratypes of *A. cavei* from the foothills east of El Zamorano, Honduras, were collected on *Byrsonima crassifolia* (L.) H.B.K. Most of these adults were collected with a beating sheet, but larvae and pupae were extracted from flower

buds taken from the same trees on 18 July, 1989, and adults emerged from some of these buds on each of the following several days. Infested buds remain attached to the inflorescence, secured by what is apparently a larval secretion.

Distribution.—*Anthonomus cavei* is known only from the type series from El Salvador (*Cabañas, La Libertad*), Honduras (*Comayagua, Francisco Morazán*), México (locality unspecified), and Panamá (*Panamá*).

Observations.—An inscription in the hand of L. L. Buchanan on a label on one of the paratypes of *A. cavei* from Panama states “Note remarkable δ med. lobe (mating end/ to end?).” This refers to the unusual sinuate shape of the aedeagus (Figs. 1, 12). When extruded, as it is in several of the paratypes (Fig. 1), the apical $\frac{1}{2}$ of the aedeagus projects posteriorly, parallel to the long axis of the body of the insect, instead of downward at roughly a right angle, as in the other two species in the *A. cavei* group and in *Anthonomini* in general.

The elytral elevations exhibit individual, sexual, and geographic variation. The length and height of the median elevation on interstria 3 varies geographically. Specimens from Panamá have this much longer and higher than do specimens from El Salvador, whereas length and height is intermediate in the specimens from Honduras. In the Panamanian males, and to a lesser extent, the males from Honduras, there is also a tendency for the anterior and especially the posterior ends of these prominences to be higher than the middle portions. This is evident in all of the females, even in the ones from El Salvador, but is markedly pronounced in the Panamanian specimens in which the posterior portion is very high. In the Panamanian specimens, and to a lesser extent in the Honduran ones, interstria 5 has a slight, elongate, elevated section, and interstriae 3 and 5 have variously elevated apical sections.

Etymological note.—This species is

named for Ronald D. Cave in appreciation for his assistance in collecting the holotype and many of the paratypes.

Anthonomus ironia Clark,

NEW SPECIES

Figs. 4, 10, 13, 14

Holotype.—COLOMBIA. *Tolima*: male [Colombia: Tolima/ Espinal/ 18 June 1982/ Clark and Cave] (USNM).

Paratypes (2).—COLOMBIA. *Tolima*: [Colombia: Tolima/ Espinal/ 18 June 1982/ Clark and Cave] (2 females AUEM).

Recognition characters.—*Anthonomus ironia* is distinguished from *A. cavei* by the characters of the meso- and metatibia of the male, sternum 5 of the male abdomen, the aedeagus and 9th sternite of the male genitalia, and of the female pygidium listed in the key to the species of the group. It is distinguished from *A. praetextum* by the characters of the profemur and male genitalia listed in the key.

Adult male.—*Length*: 3.7 mm (n = 10). *Width*: 1.8 (n = 10). *Rostrum*: Length 1.4 (n = 1) × pronotal length; length of apical portion 25 (n = 1) of total rostral length. *Abdomen*: Sternum 5 not flattened medially, without apicomedian emargination. *Legs*: Profemur ca. 1.6 × as wide as metafemur; protibia without significant inner marginal prominence; protibial uncus short, slightly curved, without basal prominence; mesotibia with slight, broad, median, inner marginal prominence; mesotibial mucro slender, without basal prominence; metatibia with inner margin nearly straight; metatibial mucro short, slightly curved, extended parallel to long axis of tibia, without basal prominence. *Genitalia* (Figs. 10, 13, 14): 9th sternite with apodeme not expanded at apex, basal plates narrowed apically; aedeagus symmetrical, bluntly rounded apically, subparallel-sided in dorsal view, broadly, evenly curved in lateral view; endophallus with two large, strongly curved, basal spines with a smaller, curved spine

between them and with a slender, straight, more apical sclerite.

Adult female.—*Length*: 3.7–3.8 mm (mean = 3.8, n = 2). *Width*: 1.8–1.9 mm (mean = 1.9, n = 2). *Rostrum*: Length 1.4–1.5 (mean = 1.4, n = 2) × pronotal length; length of apical portion 27–34% (mean = 31, n = 2) of total rostral length. *Pygidium* (Fig. 4): Without posteromedian depression.

Plant associations.—Unknown.

Distribution.—*Anthonomus ironia* is known only from the type series from Colombia (*Tolima*).

Etymological note.—The specific epithet is a Latin noun meaning the saying of one thing but meaning the opposite.

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Figs. 8, 15

Holotype.—BRAZIL. *Goiás*: male [Cristalina 1200m/ GOIAS, BRASIL/ Bordon 16 XI 83] (DZUP).

Paratypes (12).—BRAZIL. *Distrito Federal*: [BRAZIL, DF, 1000m/ Parque Nacional/ III-II-1970, JM/ & BA Campbell] (1 male CNCI). *Goiás*: [Aragarças/ Goiás – Brasil/ 12.IV.1953/ Sick Col.] (1 female MZSP); [BRESIL/ GOYAZ – JATAHY/ coll. A. Hust.] [Hustache det.] [COTYPUS] [*Anthonomus/ triangulipennis/ m./ cotype*] [Dtsch. Entomol./ Institut Berlin] [Coll. DEI/ Eberswalde] [A./ triangulipennis/ Hust.] (1 male DEIC). *Minas Gerais*: [BRAZIL: M. G./ Cardeal Mota/ 17 Sept. 1985/ Clark & Martins] (2 males, 6 females AUEM). *Pernambuco*: [Col on/ Cotton] [Bonito Prov./ Pernambuco/ Brazil. 17.I.82] (1 female USNM).

Recognition characters.—*Anthonomus praetextum* is distinguished from *A. cavei* by the characters of the meso- and metatibia of the male, sternum 5 of the male abdomen, the aedeagus and 9th sternite of the male genitalia, and of the female pygidium listed in the key to the species of the group. It is distinguished from *A. ironia* by the

characters of the profemur and male genitalia listed in the key.

Adult male.—*Length*: 3.6–3.8 mm (mean = 3.7, n = 5). *Width*: 1.7–1.8 mm (mean = 1.8, n = 5). *Rostrum*: Length 1.4–1.5 (mean = 1.5, n = 5) × pronotal length; length of apical portion 26–31% (mean = 29, n = 5) of total rostral length. *Abdomen*: Sternum 5 not flattened medially, without apicomedian emargination. *Legs* (Fig. 8): Profemur ca. 1.3× as wide as metafemur; protibia without significant inner marginal prominence; protibial uncus short, slightly curved, without basal prominence; mesotibia with slight, broad, median, inner marginal prominence; mesotibial mucro slender, without basal prominence; metatibia with inner margin nearly straight; metatibial mucro short, slightly curved, extended parallel to long axis of tibia, without basal prominence. *Genitalia* (Fig. 15): 9th sternite with apodeme not expanded at apex, basal plates narrowed apically; aedeagus asymmetrical in apical 1/3 in dorsal view, broadly, evenly curved in lateral view; endophallus with two strongly curved, basal spines and with a long, slender, more apical sclerite.

Adult female.—*Length*: 3.4–3.8 mm (mean = 3.7, n = 7). *Width*: 1.7–1.9 mm (mean = 1.8, n = 7). *Rostrum*: Length 1.4–1.6 (mean = 1.5, n = 7) × pronotal length; length of apical portion 28–31% (mean = 30, n = 7) of total rostral length. *Pygidium*: Without posteromedian depression.

Plant associations.—The paratypes of *A. praetextum* collected at Cardeal Mota, Minas Gerais, Brazil, were on unidentified Malpighiaceae.

Distribution.—*Anthonomus praetextum* is known only from the type series from Brazil (*Distrito Federal, Goiás, Pernambuco*).

Etymological note.—The specific epithet is a Latin noun meaning a pretext or excuse. The name listed on the paratype bearing the “cotype” label is a *nomen nudum*.

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